

BONDAR', N.G.

Electric modeling of the static stability of rod systems.
Prykl. mekh. 2 no.1:73-79 '56.

(MLRA 10:2)

1. Dnipropetrov's'kiy institut inzheneriv transportu.
(Structural frames--Models) (Statics)

BONDAR', N.G. (Dnipropetrov's'k).

Static stability of a very steep parabolic nonhinged arch. Prikl.
mekh. 2 no.2:204-209 '56. (MIRA 9:10)

1.Dnipropetrov's'kiy institut inzheneriv transportu.
(Arches)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1

BONDAR', N.G., doktor tekhnicheskikh nauk, professor.

Dynamics of arched spans. of massive reinforced concrete bridges.
Trudy DIIT no.25:234-274 '56. (MIRA 10:1)
(Bridges, Arched)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1"

BONDAR', N.G. [Bondar, M.H.]; TIMOSHENKO, V.V. [Tymoshenko, V.V.];
VYSOCHIN, B.M. [Vysochyn, B.M.] (Dnipropetrovsk)

Natural vibrations of three-hinged parabolic arches [in Ukrainian
with summary in Russian]. Prykl.mekh. 3 no.4:467-471 '57.
(MIRA 11:2)

I.Dnipropetrovskiy institut inzheneriv transportu.
(Arches--Vibration)

SOV/124-58-8-9110

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 8, p 113 (USSR)

AUTHOR: Bondar', N.G.

TITLE: An Electrical Analog Study of Fluctuations in the Static and Dynamic Stability of Bar Systems (Elektricheskoye modelirovaniye kolebanii staticheskoy i dinamicheskoy ustoychivosti sterzhnevykh sistem)

PERIODICAL: V. sb.: Issledovaniya po teorii sooruzheniy. Nr 7, Moscow, Gosstroyizdat, 1957, pp 549-574

ABSTRACT: The author examines several examples of the possible use of very simple electrical analog models to study problems of the natural vibrations in and stability of bar structures. For the purposes of this investigation the bar structures are treated as systems having a finite number of degrees of freedom. The possibility is mentioned of making use of the analogy that exists between the problems of the static stability of bar structures and the problems of the free vibrations thereof.

V.V. Bolotin

Card 1/1

BONDAR', N.G., prof., doktor tekhn.nauk; TIMOSHENKO, V.V., kand.tekhn,
nauk; VYSOCHIN, B.M., kand.tekhn.nauk

Free vibrations in spans of hingeless arched bridges. Trudy
DIIT no.27:65-84 '58. (MIRA 12:1)
(Bridges, Arched--Vibration)

BONDAR', N.G. [Bondar, M.H.]

New method for solving problems of vibrations of nonlinear conservative systems. Dop. AN URSR no.10:1274-1277 '61.
(MIRA 14:11)

1. Dnepropetrovskiy institut inzhenerov zheleznyodorozhnogo
transporta. Predstavлено akademikom AN USSR G.N. Savinym
[Savin, H.M.].

(Vibration)

BONDAR', N.G. [Bondar, M.H.]

Solving problems of oscillations in one class of nonlinear systems
by the variable time scale method. Dop. AN URSR no.11:1415-1418
'61. (MIRA 16:7)

1. Dnepropetrovskiy institut inzhenerov zheleznodorozhnogo
transporta. Predstavлено академиком AN UkrSSR G.N. Savinym
[Savin, H.M.].
(Oscillations) (Differential equations)

BONDAR', N.G., doktor tekhn.nauk, prof.; TIMOSHENKO, V.V., kand.tekhn.nauk,
dotsent

Evaluating the effect of the increase in train speed on the dynamics
of arched bridges. Trudy DIIT no.31:5-39 '61. (MIRA 15:5)
(Bridges, Arched)

BONDAR', N.G. (Dnepropetrovsk)

Solution of some nonlinear problems of the statics of thin
rods. Stroi. mekh. i rasch. soor. 4 no.6:21-26 '62. (MIRA 16:1)
(Elastic rods and wires)

BONDAR', N.G., doktor tekhn.nauk, prof.

Stability of spatial vibrations of the girder spans of railraod
bridges. Trudy DIIT no.32:63-87 '61. (MIRA 16:2)
(Railroad bridges—Vibration)

BONDAR', N.G., doktor tekhn.nauk, prof.

Forced spatial vibrations of the girder spans of railroad
bridges. Trudy DIIT no.32:88-105 '61. (MIRA 16:2)
(Railroad bridges—Vibration)

BONDAR', N.G. [Bondar, M.H.] (Dnepropetrovsk)

Using the method of a variable time scale in solving problems of
nonlinear vibrations of frictionless systems. Prykl.mekh. 7 no.5:
465-476 '61.
(MIRA 14' 10)

1. Dnepropetrovskiy institut inzhenerov transporta.
(Vibration)

BONDAR', M. G. [Bondar, M. H.] (Dnepropetrovsk)

Nonlinear vibrations in the presence of small resistance forces
proportional to the speed. Prykl. mekh. 9 no.3:238-248 '63.
(MIRA 16:4)

1. Dnepropetrovskiy institut inzhenerov transporta.

(Vibration)

ACCESSION NR: AR4015121

S/0124/63/000/012/A017/A017

SOURCE: RZh. Mekhanika, Abs. 12A105

AUTHOR: Bondar', N.G.

TITLE: Solution of problems of nonlinear oscillations by the variable time scale method

CITED SOURCE: Tr. Dnepropetr. in-ta inzh. zh.-d. transp., vy*p. 38, 1962, 5-27

TOPIC TAGS: oscillation, nonlinear oscillation, variable time scale

TRANSLATION: The author gives a method of solving certain classes of nonlinear problems: the nonlinear oscillations of autonomous systems, free oscillations of nonlinear systems with a resistance proportional to the square of the velocity, nonlinear oscillations of conservative systems, forced oscillations of nonlinear systems, etc. The method consists essentially in the introduction of a new time scale variable; when this is done, the initial nonlinear equations become linear.

Card 1/2

ACCESSION NR: AR4015121

It should be noted that the new time appearing in the linear equations is determined from integral expressions. Illustrated examples are included. G.V. Plotnikova.

DATE ACQ: 31Dec63

SUB CODE: PH, MM

ENCL: 00

Card 2/2

ACCESSION NR: AR4015122

S/0124/63/000/012/A017/A017

SOURCE: RZh. Mekhanika, Abs. 12A106

AUTHOR: Bondar', N.G.

TITLE: Oscillations of nonlinear systems containing a small parameter

CITED SOURCE: Tr. Dnepropetr. in-ta inzh. zh.-d. transp., vy*p. 38, 1962, 28-59

TOPIC TAGS: nonlinear system, oscillation, small parameter, small parameter system, mathematical pendulum, pendulum

TRANSLATION: The author considers the nonlinear equation

$$\ddot{x}(t) + N(x) \dot{x}(t) + R(x) = F(t) \quad (1)$$

It is assumed that the function $N(x)$ contains a small parameter. Using the idea of a variable time scale by a method analogous to the Van der Pol method, the author finds an approximate solution to equation (1).

As special cases, he considers the auto-oscillations of systems close to

Card 1/2

ACCESSION NR: AR4015122

conservative and linear systems, free and forced oscillations of nonlinear systems with viscous friction, and oscillations of nonlinear systems with slowly varying parameters.

He cites the example of the oscillations of a mathematical pendulum whose length changes slowly. G.V. Plotnikova.

DATE ACQ: 31Dec63

SUB CODE: MM

ENCL: 00

Card 2/2

BONDAR', N.G.

(Enepropetrovsk)

Approximate solution of some problems of the statics of elas-
tic rods. Stroi. mekh. i rasch. sooruzh. 5 no.6817-22 '63
(MIRA 1787)

BONDAR', N.G., prof.; DOROSHENKO, Ye.V., inzh.; ROYTBURD, Z.G., inzh.;
EYKHE, G.N., inzh.

Results of testing a reinforced concrete bridge. Bet. i zhel.-bet.
9 no.10:469-470 O '63. (MIRA 16:12)

1
BONDAR', N.G.

Designing untapered piles sunk by the vibration method. Vop.
geotekh. no.6:20-49 '63. (MIRA 17:9)

BONDAR', N.S. [Bondar, N.N.]

Approximate integration of equations describing oscillations of
nonlinear systems close to conservative ones. Dop. AN UkrSSR no.3:
332-336 '63. (MIRA 17:10)

1. Dnepropetrovskiy institut inzhenerov zheleznodorozhnogo transporta.
Predstavлено академиком AN UkrSSR G.M. Savinym [Savin, H.M.].

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1

BONDAR', N.G., doktor tekhn.nauk; KHOKHLOV, A.A., inzh.; DOROSHENKO, Ye.V.,
inzh.

Carrying capacity of bridges under combined types of traffic.
Transp. stroi. 14 no.6:46-47 Je '64. (MIRA 18:2)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1"

BONDAR!, N.G.; doktor tekhn. nauk (Dnepropetrovsk)

Using a method of variable time scale for studying the nonlinear
vibrations of an oscillator caused by pulses. Issl. po teor. sooruzh.
no.13:145-159 '64.

(MIRA 18:2)

BONDAR', Nikolay Gerasimovich, doktor tekhn. nauk, prof.; KAZEY,
Igor' Ivanovich, kand. tekhn. nauk; LESHOKHIN, Bernard
Falkovich, kand. tekhn. nauk; KOZ'MIN, Yuriy Georgiyevich,
kand. tekhn. nauk; dots.; Prinimali uchastiye: TARASENKO,
V.P., kand. tekhn. nauk; YAKOVLEV, G.N., kand. tekhn. nauk
dots.; DOROSHENKO, Ye.V., kand. tekhn. nauk; NEVZOROV,
I.N., inzh.; KONASHENKO, S.I., kand. tekhn. nauk, dots.;
ORLENKO, V.P., inzh.; KHOKHLOV, A.A., kand. tekhn. nauk,
dots.; ZELEVICH, P.M., kand. tekhn. nauk, red.

[Dynamics of railroad bridges] Dinamika zhelezno-dorozhnykh
mostov. [By] N.G. Bondar' i dr. Moskva, Transport, 1965.
(MIRA 18:12)
411 p.

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1

BONDAR', N.G., doktor tekhn.nauk, prof. (Dnepropetrovsk); DENISHENKO, Yu.N., inzh.
(Dnepropetrovsk)

Application of the method of a variable time scale to the solution
of problems concerning the dynamic action of a shifting load on a
structure. Issl. po teor. sovrazh. no.14373-91 '65.

(MIRA 18:10)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1"

BONDAR, N.I.

829. **Blood Transfusion in Treatment of Tuberculosis**
(Переливание крови в клинике туберкульоза туберкулеза)

N. I. BONDAR, A. L. BRODSKII, F. P. VERNHOVSKII,
A. M. VORONOV, A. L. GALPERIN, M. M. A. GRULOVICH,
P. M. MAXIMOV, and V. A. RAVICH-SCHERERO.
Проблемы Туберкулеза [Probl. Tuber.], No. 1, 3-14.
Jan.-Feb., 1950. 2 figs., 3 refs.

Much work has been done in the Soviet Union to prove that tuberculous patients are not allergic to human blood. It has also been proved that blood transfusions in these cases need not produce any general or local reactions whatsoever. The very severe reactions which were produced by transfusion at the beginning of the experiments have now been eliminated; it has been established that they were due to impurities and to lack of asepsis in the technique of administration. Transfusion cannot be regarded as a basic method of treatment.

but serves a subsidiary purpose. (a) as a stimulator of the connective tissues; (b) as a stimulator of the blood vessels; (c) as substitution therapy after great blood loss. Blood transfusion is also important as a preliminary to surgical intervention and in post-operative treatment. More work should be done on the desensitizing effect of blood transfusion in the presence of pleural reactions to treatment with artificial pneumothorax. The use of dry serum is advisable as a haemostatic agent. Blood transfusions are contraindicated in hopeless cases such as those of acute caseous pneumonia, acute haemogenous spread, and terminal exacerbations. *H. W. Swann*

830. Abstracts of World Medicine
Hoover Vol 8 1950
Tabera
W. P.

BONDARI, N. I.; SIDOROVA, Ye. F.

Chest- Surgery

Modified extended thoracoplasty with pneumonolysis and fixation of the apex. Probl. tub.
No. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 1958, Uncl. 2

BONDARENKO, kandidat meditsinskikh nauk (Moskva)

Late results of surgical treatment of chronic suppurative
tuberculous pleurisy. Klin. med. 32 no.11:34-40 N 1954.
(MIRA 8:1)
1. Is Moskovskogo gorodskogo tuberkuleznogo nauchno-issledo-
vatel'skogo instituta (dir.-prof. F.A.Mikhaylov)
(TUBERCULOSIS, PULMONARY, complications
pleurisy, surg. late results)

BONDAR', N.I., kandidat meditsinskikh nauk.

Experience in the treatment of chronic and complicated tuberculous
empyema. Probl. tub. no.6:26-29 N-D '55. (MLRA 9:2)

1. Iz Moskovskogo gorodskogo nauchno-issledovatel'skogo
tuberkuleznogo instituta (zam. dir. po nauchnoy chasti-prof. V.L.
Hynis)

(TUBERCULOSIS, PULMONARY, complications,
pleural empyema, ther.)

BONDAR', N.I.; GOROKHOVA, Ye.M.; ZHINGEL', I.P.; KOPEL'MAN, M.Yu. (Moskva)

Cavernotomy in the treatment of giant and large caverns. Klin.med.
34 no.12:12-19 D '56. (MLRA 10:2)

1. Iz Moskovskogo gorodskogo nauchno-issledovatel'skogo tuberkulez-
nogo instituta (dir. V.F.Chernyshev, nauchnyy rukovoditel' - prof.
V.L.Dynis) i 2-y zagorodnoy Moskovskoy tuberkuleznoy bol'nitsy
(glavnyy vrach D.I.Dymarin zav. khirurgicheskim otdeleniyem M.Yu.
Kopel'man, konsul'tant N.I.Bodnar')

(TUBERCULOSIS, PULMONARY, surg.
resection of large & giant cavitations)

BONDAR", N.I., kand.med.nauk

Hemorrhage of the thoracic duct during right pulmonectomy.
Probl. tub. 36 no.4:110-111 '58 (MIRA 11:7)

1. Iz Moskovskogo gorodskogo nauchno-issledovatel'skogo tuberkuloz--
nogo instituta (dir. V.F. Chernyshev, nauchnyy rukovoditel' - prof.
V.L. Rynis)

(PNEUMONECTOMY, Compl.

theracic duct hemorrh. in right pneumonectomy in
pulm.tuberc (Rus))

(THORACIC DUCT, hemorrh.

in right pneumonectomy in pulm. tuberc. (Rus))

BONDAR', N.I., kand.med.nauk

Surgical therapy of chronic tuberculous empyemas; survey of
Soviet and foreign literature. *Mirurgia* 35 no.4:136-
141 Ap '59. (MIRA 12:8)

1. Iz Moskovskogo gorodskogo nauchno-issledovatel'skogo
tuberkuleznogo instituta (dir. - V.F.Chernyshev, zamestitel'
po nauchnoy chasti - prof. V.L.Bynis) i Instituta tuberkuleza
Ministerstva zdravookhraneniya RSFSR (dir. - V.F.Chernyshev,
nauchnyy rukovoditel' instituta prof. D.D.Aseyev).

(TUBERCULOSIS, PULMONARY, compl.
empyema, ther., review (Rus))

BONDAR', N.I., kand.med.nauk; ZHINGEL', I.P.

Modification of cavernotomy in combination with superoposterior thoracoplasty. Probl.tub. 37 no.4:59-63 '59. (MIRA 12:10)

1. Iz Nauchno-issledovatel'skogo instituta tuberkuleza Ministerstva zdravookhraneniya RSFSR (dir. - dotsent V.F.Chernyshev, nauchnyy rukovoditel' - prof.D.D.Aseyev).
(COLLAPSE THERAPY

thoracoplasty, superoposterior, combined with
cavernotomy (Rus))
(TUBERCULOSIS, PULMONARY, surg.
cavernotomy combined with superoposterior
thoracoplasty (Rus))

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1

BONDAR', N. I., Doc Med Sci -- (diss) "Surgical treatment of chronic tubercular empyemas." Moscow, 1960. 19 pp; (First Moscow Order of Lenin Medical Inst im I. M. Sechenov); 250 copies; price not given; (KL, 26-60, 142)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1"

PHASE I BOOK EXPLOITATION SOV/4266

Progressivnaya tekhnologiya i vysokoproizvoditel'nyy instrument; opyt KhTGZ imeni Kirova (Advanced Processing and Highly-Productive Tools; Experience of the Kharkov Turbogenerator Plant imeni Kirov) Moscow, Mashgiz, 1960. 155 p. 5,500 copies printed.

Reviewer: P. Ye. Dudnik Engineer; Ed.: M. S. Soroka; Chief Ed. (Southern Division, Mashgiz): V. K. Serdyuk, Engineer.

PURPOSE: This booklet is intended for technical personnel and innovators.

COVERAGE: The booklet discusses the experience of innovators and technical personnel in introducing advanced processes and machine tools at the KhTGZ imeni Kirov (Khar'kov Turbogenerator Plant) for the manufacture of steam turbine rotors, for tapping coarse threads, processing steam turbine blades. Experience in introducing artificial cooling for interference fits, and in mastering the manufacture of welded steam-turbine rotors is described. The

Card 1/3

Advanced Processing (Cont.)

SOV/4266

booklet covers the advances in technology developed and introduced at the factory in the last few years. No personalities are mentioned. No references are given.

TABLE OF CONTENTS:

Foreword

Repin, M. N. Development in Turbine Manufacturing Processes at the Khar'kov Turbogenerator Plant imeni Kirov	5
Rubinshteyn, S. Ye., and P. N. Pestushko. Some Special Features in the Processing of Steam Turbine Rotors	13
Pestushko, P. N., and <u>N. I. Bondar'</u> . Machine Tapping of Large Diameter Internal Threads	49
Vol, L. A. Fitting of Keyways in Steam Turbine Disks and Shafts	71

Card 2/3

Advanced Processing (Cont.)	SOV/4266
Volosov, M. P., and V. L. Popov. Experience Using Artificial Cooling for Interference Fits	90
Shaykher, P. A. Manufacture of Turbine Blades for the Last Stage From Die-Forged Blanks	108
Shepel'skiy, P. F. What's New in the Production of Turbine Blades	128
Zolotukhin, K. D. Welded Steam Turbine Rotors	152
AVAILABLE: Library of Congress	VK/rn/ec
Card 3/3	11-14-60

BONDAR', N.I.

Local anesthesia in intrathoracic operations for chronic tuberculous
empyema. Eksper. khir. 5 no.1:22-28 Ja-F '60. (MIRA 13:12)
(TUBERCULOSIS) (LOCAL ANESTHESIA)

BONDAR', N.I.; RYMKO, L.P.

Late results of pleurectomy in tuberculous empyema. Sov.med. 26
no.10:70-76 O '62. (MIRA 15:12)

1. Iz legochno-khirurgicheskogo otdeleniya (zav. - doktor med.
nauk N.I.Bondar') Gosudarstvennogo nauchno-issledovatel'skogo
instituta tuberkuleza (dir. - kand.med.nauk B.F.Chernyshev)
Ministerstva zdravookhraneniya RSFSR,
(EMPYEMA) (PLEURA--SURGERY) (TUBERCULOSIS)

BONDAR', N.I.

Pleurectomy combined with a pulmonary resection as a method of
treating fibrocavernous tuberculosis complicated by empyema.
Khirurgiia 38 no.12:9-14 D '62. (MIRA 17:6)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta
turberkuleza (direktor - kand. med.nauk T.P. Mochalova,
nauchnyy rukovoditel' prof. D.D. Aseyev) Ministerstva
zdravookhraneniya RSFSR.

ACC NR: AP7002410

SOURCE CODE: UR/0363/66/002/012/2248/2250

AUTHOR: Bondar', N. M.

ORG: Odessa Polytechnic Institute (Odesskiy politekhnicheskiy institut)

TITLE: Study of the systems Sb_2Se_3 - Bi_2Te_3 and Sb_2Te_3 - Bi_2Se_3

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 12, 1966, 2248-2250

TOPIC TAGS: selenide, telluride, bismuth compound, antimony compound

ABSTRACT: The quasi-binary section of the $SbSe_3$ - Bi_2Te_3 system and Sb_2Te_3 - Bi_2Se_3 system was studied by x-ray diffraction, which showed the formation of a continuous series of solid solutions in $SbSe_3$ - Bi_2Te_3 . A limited solubility of the components was observed in the Sb_2Se_3 - Bi_2Te_3 system. Solid solutions with an Sb_2Se_3 concentration up to 70 wt. % were obtained having the basic trigonal structure of Bi_2Te_3 . Above this concentration, a two-phase region exists. The solubility of Bi_2Te_3 in the rhombic lattice of antimony selenide is less than 10%. In the Sb_2Te_3 - Bi_2Se_3 system, p- and n-type samples were obtained. The Sb_2Se_3 - Bi_2Te_3 system gives only a hole-type conductivity. Orig. art. has: 2 figures.

SUB CODE: 07/ SUBM DATE: 01Dec65/ ORIG REF: 003/ OTH REF: 003

Card 1/1

UDC: 541.123.6

DUTCHAK, Ya.I.; BONDAR, N.M. [Bondar, N.M.]

Nature of the ordering of atoms in a cadmium - tin system.
Ukr. fiz. zhur. 4 no.3:402-403 My-Je '59. (MIRA 13:2)

1.L'vovskiy gosudarstvennyy universitet im. Iv. Franko.
(Cadmium-tin alloys)

L 35977-66 EWT(m)/EWP(t)/STI IJF(c) JD
ACC NR: AP6016046 (A) SOURCE CODE: UR/0185/66/011/055/0534/0537
50
AUTHORS: Bondar, N. M. -- Bondar', N. M.
B
ORG: Odessa Polytechnic Institute (Odes'kyy politekhnichnyy instytut)
TITLE: Investigation of the Bi_2S_3 - Sb_2Te_3 system
SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 11, no. 5, 1966, 534-537
TOPIC TAGS: solubility, hole conduction, specific resistance, ~~bismuth~~
~~sulfide, antimony telluride, bismuth antimony system Bi/Smutu~~
~~compound, Antimony compound~~
ABSTRACT: The Bi_2S_3 - Sb_2Te_3 system has been investigated. Solid solutions of limited solubility were obtained from Bi_2S_3 as well as from Sb_2Te_3 . At concentrations of 28--65% by weight of Sb_2Te_3 , a four-component compound of the trigonal syngony $(\text{Bi}, \text{Sb})_2(\text{S}, \text{Te})_3$ was determined. In the range of 65--80% by weight of Sb_2Te_3 , the system is two phase. The synthesized polycrystalline samples are characterized by electron and hole conduction with a specific resistance of 1×10^{-3} ohm. cm. Orig. art. has: 1 figure and 1 table. [Based on author's abstract] [NT]
SUB CODE: 07/ SUBM DATE: 28Apr65/ ORIG REF: 003/ OTH REF: 002
ns
Card 1/1

MOVCHAN, Ye.A. [Movchan, I.E.O]; BONDAR', N.N. [Bondar, M.M.]

Some properties of germanium alloyed with La, Pr, and Nd.
Ukr. fiz. zhur. 8 no.4:496-497 Ap '63. (MIRA 16:8)

1. Institut poluprovodnikov AN UkrSSR, Kiiev.
(Germanium alloys)

BONDAR', N.Ya.

Conference of the inventors and efficiency promoters of the Kiev
Province. Izobr. v SSSR 2 no.1:40 Ja '57. (MLRA 10:4)
(Kiev Province--Efficiency, Industrial)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1

BONDAR', N.Ya.

New bucket shovels, Izobr. v SSSR 2 no.4:18 Ap '57. (MIRA 10:6)
(Peat machinery) (Shoveling machines)

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CIA-RDP86-00513R000206210018-1"

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1

BONDAR, N.Y.

Equipment for straightening tractor frames. Izobr.v SSSR 2
no.5:20 My '57. (MLRA 10:7)
(Tractors--Repairing)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1"

AUTHOR: Bondar', N. Ya., Engineer. 100-57-12-7/11

TITLE: Improvement of the Operations of Excavator E-153: Uluchshit' ekspluatatsionnyye kachestva ekskavatora E-153

PERIODICAL: Mekhanizatsiya Stroitel'stva, Nr.12. 1957. pp.25. (USSR)

ABSTRACT: The above-mentioned excavator is manufactured by the Kiyev factory "Krasnyy ekskavator", and by the Minsk tractor factory which produces the excavator base, the MTZ-2 tractor (more recently the modernised MTZ-5). The author describes in detail the short-comings of this tractor and advises on points of adaptation. It has been found that the hydraulic lift is unreliable in the case of tractor MTZ-5.

AVAILABLE: Library of Congress.

Card 1/1 1. Tractors-Manufacture 2. Excavators-Manufacture

BONDAR', N.Ya.

Conference of innovators in the Kiev Economic region. Izobr. v
SSSR 3 no.2:48 F '58. (MIRA 11:3)
(Kiev Economic region--Inventors)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1

~~BONDAR' N.Y.~~

Let us Introduce licensing of road machinery drivers. Avt. dor.
21 no.2:25 F '58. (MIRA 11:2)
(Road machinery)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1"

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1

BONDAR', N.Ya.

Cleaning dust from dust removers. Avt.dor. 21 no.9:26 S '58.
(Dust--Removal) (Road machinery) (MIRA 11:11)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1"

BONDAR', N.Ya., tekhnik-mekhanik

Improving sleeve joints of tractor-mounted loaders. Transp.
stroi. 10 no.1:56 Ja '60. (MIRA 13:6)
(Loading and unloading)

BONDAR', N., tekhnik-mekhanik

Two instead of thirty-six. NTO 2 no.2:47 F '60. (MIRA 13:5)

1. Chlen Nauchno-tekhnicheskogo obshchestva neftyanoy promyshlennosti, Kiyev.

(Concrete mixers)

BONDAR', N.Ya., tekhnik-mekhanik

New method for connecting rubber-coated belts. Transp.stroi.
10 no.3:52 Mr '60. (MIRA 13:6)
(Vulcanization) (Belts and belting)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1

Repairing tractor and bulldozer frames. Transp. strel. 11 no.2:51
F '61. (MITA 14:2)

(Tractors--Maintenance and repair)
(Bulldozers--Maintenance and repair)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1"

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1

BONDAR', N.Ya.

Changes in the organization for the repair of engines. Stroi.
truboprov. 9 no.6:14 Je '64. (MIRA 17:12)

1. Trest Ukrugazneftstroy, Kiyev.

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1"

ARASHKEVICH, Vsevolod Markovich; BONDAR', N.Z., retsenzent;
GLEMBOTSKIY, V.A., prof., doktor tekhn. nauk, retsenzent;
KUNIK, V.P., red. izd-va; BOLDYREVA, Z.A., tekhn. red.

[Dressing of nonferrous metal ores] Obogashchenie rud tsvetnykh metallov. Moskva, Izd-vo "Nedra," 1964. 492 p.
(MIRA 17:2)

19
A new occurrence of radioactive waters in the region of station Znemyanka. O. G. Nester. *Geol. Zhur., Akad. Nauk Ukr. R.S.R., Inst. Geol. Nauk* 17, No. 2, 75-7 (1957). Radium analyses and chem. compn. of the radioactive waters in the Znemyanka region, Kirovogradsk province, are given. A. Volbarth

5
1-RM
1-MW

RML

VYLEGZHANIN, A.I.; BONDAR, O.P.

Treatment of persistent vomiting in pregnancy. Akush. gin. no. 1:
32-35 Jan-Feb 1953. (CLML 24:2)

1. Doctor Medical Sciences for Vylegzhannin. 2. Of the Department of
the Pathology of Pregnant Women, Ukrainian Institute of Clinical Med-
icine (Director — Academician N. D. Strashesko, deceased).

BONDAR', Petr Antonovich; KUDRYASHOV, Grigoriy Fedorovich, starshiy
vospitatel'; MEDVEDEVA, L.V., red.; SHADRINA, N.D., tekhn.red.

[In our dormitories] V nashikh obshcheshchitiiakh. Izd-vo
VTsSPS Profizdat, 1958. 85 p. (MIRA 12:6)

1. Predsedatel' kul'tkomissii zavkoma Khar'kovskogo traktornogo
zavoda im. Ordzhonikidze (for Bondar').
(Labor and laboring classes--Dwellings)
(Tractor industry)

Subject : USSR/Engineering AID P - 364
Card : 1/1
Authors : Masenko, I. D. and Bondar', P. B., Engineers
Title : Package transportation of material for wall construction
Periodical : Sbor. mat. o nov. tekhn. v stroi., 5, 10-13, 1954
Abstract : An improved method has been devised by the Building Trust in Krivoy Rog to transport building material for wall construction (bricks, slate blocks, etc.) by means of a special automatic pendulum grip of the grab-bucket type suspended from a hook of a crane. This grip gets hold of a platform on which 150-200 bricks or 24-30 slag blocks are piled and are deposited on trucks by a crane. Similar procedure takes place in unloading. 2 photos and 2 graphs show the details.
Institution : None
Submitted : No date

SOV/97-58-10-8/17

AUTHORS: Bondar', P.B., Knizhnik, L.V., and Yeliseyeva, V.D.
(Engineers)

TITLE: Manufacture, on Stands, of Precast Prestressed Reinforced Concrete Beams (Opyt izgotovleniya predvaritel'no napryazhennykh zhelezobetonykh balok na stende)

PERIODICAL: Beton in zhelezobeton, 1958, Nr 10, pp 386-388 (USSR)

ABSTRACT: Manufacture of precast prestressed reinforced concrete beams in factory "Stroydetal" Nr 2 of the R trust "Krivorozhstroydetal'" is described. Hydraulic jack SM-513 (shown in Fig 1) with a capacity of 60 t, was used for tensioning. The stand is 84 m long and 4 m wide. The beams are 18 m long, shaped as in Fig 2. The beam was designed by Khar'kov branch of Promstroyproyekt. At present the reinforcement consists of 5 mm diameter high tensile, cold rolled wires of standard profile UMTU 4987-55. A detailed description of the concrete vibrator I-116 is used. Curing begins at a temperature of up to 70°C for a duration of 4 hours; the curing itself is carried out at the same temperature for 14 hours, and during termination of curing the temperature drops down to 20°C over a period of 6 hours. The reinforcements are cut by means of a metal cutting

Card 1/2

SOV/97-58-10-8/17
Manufacture, on Stands, of Precast Prestressed Reinforced Concrete
Beams

disk as illustrated in Fig 3. This is powered by
electric motor I-116 of 36 W and 2750 r.p.m. Fig 4
shows the lifting of the finished beam by means of a
bridge crane of 5 t capacity.
There are 4 figures and 1 table.

Card 2/2

BONDAR', P.G.

Device for mixing and taking samples of liquid filter-press mud
for measuring flasks. Sakh.prom. 35 no.7:42-43 Jl '61.

(MIRA 14:7)

1. Gruppovaya laboratoriya Chernovitskogo sakharotresta.
(Filters and filtration)

L 1716-66 EWT(m)/EPF(c)/EWP(t)/ENP(b) IJP(c) JD

ACCESSION NR: AP5020951

UR/0073/65/031/008/0768/0771

AUTHOR: Pamfilov, A. V.; Bondar', P. G.; Mazurkevich, Ya. S.

24
23
B

TITLE: Effect of modification on the energy required for removing an electron from titanium dioxide

SOURCE: Ukrainskiy khimichesky zhurnal, v. 31, no. 8, 1965, 768-771

TOPIC TAGS: titanium dioxide, aluminum hydroxide, paint, catalysis, electron removal, electric potential, electromotive force

ABSTRACT: The work deals with changes in contact difference of TiO_2 potentials upon introducing admixtures under conditions corresponding to those for the catalytic synthesis of hydrogen peroxide. Iron, copper, gold, and molybdenum were added as FeSO_4 , CuSO_4 , AgNO_3 and HgMoO_4 under subsequent heating to 500 C maintained for 24 hours. The contact differences of potentials were measured by the Kelvin method on specimens previously processed under vacuum at 60 C for 1 hour. A table shows the difference in TiO_2 potentials under vacuum at room temperature for all admixtures, varying from 0.0003 to 0.3 at%. Decrease in the potential of the TiO_2 surface upon soaking it in low concentrations of iron

Cord 1/2

L 1716-66

ACCESSION NR: AP5020951

or molybdenum salts was apparently related to the formation of a solid solution in the surface layer. Due to the closely approximating size of the Fe^{+3} and Ti^{+4} radii, higher concentration should lead to substitution and a decrease in the concentration of free electrons, and therefore greater energy for removing an electron from TiO_2 and an increase in potential. This was confirmed. Maximal speed of catalytic reaction corresponded to a certain electric potential of the surface, so that TiO_2 was a good photocatalyst only at certain admixture concentrations. Both the nature and purity of the admixed substance were important. Thus small admixtures decrease the energy required, while large additions increase it. Modification of TiO_2 with Al(OH)_3 led to considerable increase of the work required for removing an electron ($\Delta\Phi = +374 \text{ ma}$) and a two-fold increase of surface stability in air. Orig. art. has: 1 table and 2 figures

ASSOCIATION: Chernovitskiy gosudarstvenny universitet (Chernovits State University)

SUBMITTED: 04Apr64

ENCL: 00

SUB CODE: IC, GC

NR REF SOV: 007

OTHER: 005

Card 2/2

L 2003-66 EWT(1)/EWT(m)/EPF(c)/EPA(w)-2/T/EWP(t)/EWP(b)/EWA(m)-2/EWA(h) IJP(c)

JD/AT

ACCESSION NR: AP5023967

UR/0073/65/031/009/0918/0923

546.821+537.533.2

AUTHOR: Pamfilov, A. V.; Mazurkevich, Ya. S.; Bondar', P. G.

44,55

44,55

44,55

53

50

B

TITLE: Effect of illumination on electron work function from titanium dioxide

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 31, no. 9, 1965, 918-923

TOPIC TAGS: UV irradiation, work function, electron mobility, semiconductor research, titanium dioxide

ABSTRACT: The effect of UV illumination on electron work function from titanium dioxide at various O₂ and H₂O partial pressures was studied by means of contact potential difference technique. Before each test, the TiO₂ samples were activated for 1 hour at 50°C and 10⁻³ mm Hg. The electron work function from titanium dioxide depends upon the surface condition. For clean TiO₂ samples the UV illumination is reflected in reduced electron work function due to photodesorption. The effect of UV illumination on contact potential difference of TiO₂ is shown in fig. 1 of the Enclosure. The kinetics of decline and build-up of the contact potential difference due to UV switch on and off at P_{O₂}=P_{H₂O}=8mm Hg is shown in fig. 2 of the

Card 1/5

L 2003-66

ACCESSION NR: AP5023967

Enclosure. The effect of UV illumination on the contact potential difference of TiO_2 at $P_{O_2}=10^{-4}$ mm Hg is shown in fig. 3 of the Enclosure, where: 1 is for rutile "malarin", 2 is rutile "malarin" cleaned with HCl. For TiO_2 surfaces covered with sulfates, the UV illumination is reflected in increased electron work function due to photosorption of oxygen. Orig. art. has: 1 table, 5 figures.

ASSOCIATION: Chernovitskiy gosudarstvennyy universitet (Chernovtsy State University)

SUBMITTED: 29Apr64

ENCL: 03

SUB CODE: IC, GC, SS, OP

NO REF Sov: 005

OTHER: 006

Card 2/5

L 2003-66

ACCESSION NR: AP5023967

ENCLOSURE: 01 (c)

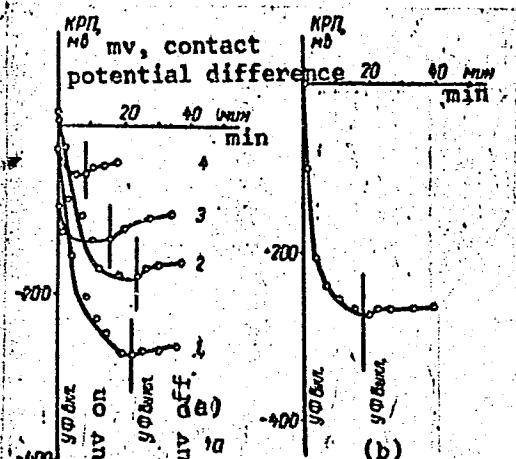


Fig. 1. (a): 1 and 3--rutile
"malarin", 2--untreated rutile,
4--ZnO; 1, 2, and 4-- $p_{O_2} = 10^{-4}$ mm
Hg.

Card 3/5

L 2003-66

ACCESSION NR: AP5023967

ENCLOSURE: 02

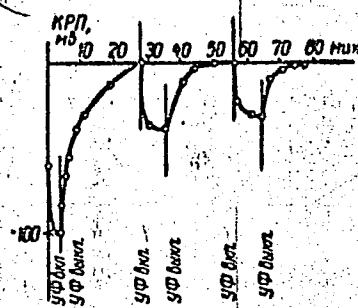


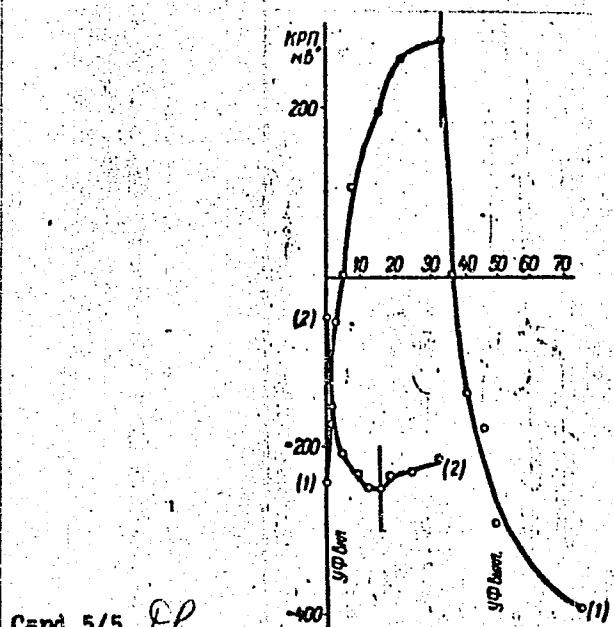
Fig. 2.

Card 4/5

L 2(03-66)

ACCESSION NR: AP5023967

ENCLOSURE: 03



PAMFILOV, A.V.; BONDAR', P.G.; MAZURKEVICH, Ya.S.

Effect of oxygen and water vapor adsorption on work function of an electron from titanium dioxide. Ukr. khim. zhur. 31 no.1:48-53 '65.
(MIRA 18:5)

1. Chernovitskiy gosudarstvennyy universitet.

PAPOLOV, V.V.; SONDAR', P.G.; MAZURKEVICH, Ya.S.

Effect of modification on the work function of an electron from
titanium dioxide. Ukr. khim. zhur. 31 no.8:768-771 '65. (MIRA 18:9)

I. Chernovitskiy gosudarstvennyy universitet.

PAMFILOV, A.V.; MAZURKEVICH, Ya.S.; BONDAR', P.G.

Effect of illumination on the work function of an electron from
titanium dioxide. Ukr. Khim. zhur. 31 no.9:918-920 '65.
(MIR 18:11)

1. Chernovitskiy gosudarstvennyy universitet.

BONDAR', R.Ya.

Study of immunity in individuals vaccinated against tularemia.
Zhur.mikrobiol.epid.i immun. no.2:70 F '54. (MLRA 7:3)

1. Iz Odesskogo instituta vaktsin i syvorotok. (Tularemia)

BONDAR', R. Ya., Cand Med Sci -- (diss) "Allergic and serological tests (reactions) in tularemia." Odessa, 1957. 15 pp (Odessa State Med Inst im N. I. Pirogov), 200 copies (KL, 2-58, 116)

-63-

USSR / Microbiology. Microbes Pathogenic to Man
and Animals. Tularemia Microbe. F

Abs Jour : Ref. Zhur - Biol., No. 21, 1958, No. 95183

Author : Bondar', R. Ya.
Inst : Odessa Scientific-Research Institute of
Epidemiology and Microbiology.

Title : Immunological Reaction During Experimental
Reinfection With Tularemic Microbes.

Orig Pub : Tr. Odessk. n.-i. in-ta epidemiol. i mikrobiol,
1957, 2, 61-65

Abstract : Twenty guinea pigs that had had tularemia
for 15 months before the start of the test
(owing to an experimental injection) received
10,000 DLM subcutaneously of live tularemic
bacteria. All of the guinea pigs survived,
showing only a brief increase of temperature.

Card 1/4

48

USSR / Microbiology. Microbes Pathogenic to Man
and Animals. Tularemia Microbe.

F

Abs Jour : Ref. Zhur - Biol., No. 21, 1958, No. 95183

In 5 of these guinea pigs, an intracutaneous sample with tularemia and AR before the start of the test were negative. Five control guinea pigs, that had not had tularemia, died on the 6-8th day after infection. On the 10th day after infection, allergic reactions were clearly expressed in all of the reinfected animals. In an analogous test with rabbits, 5 animals that had first received 10,000 microbe bodies, and were reinfected with 500 million bacteria, survived; two rabbits which had first received 50 microbe bodies and were also reinfected with 500 million bacteria died on the 12-13th day after reinfection; the control rabbits died

Card 2/4

USSR/ Microbiology. Microbes Pathogenic to Man
and Animals. Tularemia Microbe.

F

Abs Jour : Ref. Zhur - Biol., No. 21, 1956, No. 95183

on the 9-15th day. Allergic reactions in all the rabbits were negative before reinfection and on the 10th and 30th day after it. The phagocytal activity of the leukocytes decreased by 2-2½ times toward the 30th day after reinfection. Ten rabbits were immunized with a vitelline tularemic vaccine and in 9 months were infected with 500 million live tularemic microbes. Two of these rabbits and 5 of the control died, 8 survived. In all the rabbits, the sero-allergic reactions were negative to the moment of infection; after infection they were positive. Thus, in 9-15 months after infection or immu-

Card 3/4

Card 4/4

Pathology 11-5

CA

100-10000-100

The question of the mechanism of the increase in the content of alkaline phosphatase in the blood in mechanically produced jaundice. S. A. Bouzar (Med. Inst. Ministry of Health R.S.F.S.R., Moscow). "Klin. Med. (U.S.S.R.)" 27, No. 12, 64-7 (1949); "Chem. Zvdr." 1950, II, 1363-4. Phosphatase (I) is present in most human tissues and is concerned with the processes of growth and metabolism. A series of detns. of the I content of the blood was made on 110 patients suffering from liver disorders, 30 of whom suffered from mechanically produced jaundice resulting from malignant tumors, 20 from that resulting from concretions, while the remainder suffered from parenchymatous jaundice. In all cases there was an increase in the I content of the blood. The highest values were found in cases in which there was complete mech. closing of the bile duct. A parallel could be established between the I content of the blood and its bilirubin content. In hepatitis epidemics the increase in I was moderate (6.8-18.1 as compared to 24-40.3 units in mechanically produced jaundice) and the I values returned to normal with convalescence. The condition was apparently produced by the stoppage of the internal liver passages. The I values remained normal in hemolytic jaundice. This was also true of primary and secondary cirrhoses of the liver without jaundice. The condition of the cells of the liver also plays a decisive role in such conditions. M. G. Moore

BONDAR, S. A.
USSR / General and Special Zoology. Insects.

P

Abs Jour: Ref Zhur-Biol., No 3, 1958, 11709

Author : Bondar S. A.

Inst : Not given

Title : The Effectiveness of Small Doses of Hexachlorane
in the Control of Soil Pests.

Orig Pub: Zashchita rast. ot vredit. i boleznei, 1956,
No 5, 40-41.

Abstract: The adding of 25% of hexachlorane dust in doses
of 30 kg/hectare, 60 kg/hectare and 80 kg/hectare
to the cultivator caused the death respectively
of 94.4%, 79.1% and 85.7% of the larvae of leaf-
horned beetles and of 63.6%, 91% and 100% of the
larvae of wire-shaped beetles. Scattering by a
sowing machine of 12% and 25% dusts in a dose of
10 kg/hectare mixed with soil sifted through a

Card 1/2

USSR / General and Special Zoology Insects
APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206210018-1"

Abs Jour: Ref Zhur-Biol., No 3, 1958, 11709

Abstract: sieve and embedded into a depth of 6-7 cm in a
manureless ground caused the death respectively
of 89% and 89.5% of the larvae of leaf-horned
beetles and 84.1% and 85% of the larvae of wire-
shaped beetles. The effectiveness of hexachlorane
decreased in soils having a high content of
organic substances. Therefore a small amount of
hexachlorane should be used prior to the employ-
ment of manure. Introduction of hexachlorane into
rows (7-10 kg per hectare) in combination with a
prior-to-sowing treatment of seeds by a 12% solu-
tion of hexachlorane (2 kg/contner) decreased the
breeding of the curculionidae beet beetles by
86.7%-90%.

Card 2/2

BONDARI, S.G.

Packing for steam engines. Sakh. prom. 33 no.1:56 Ja '59.
(MIRA 12:1)

1.Kongressovskiy sakhariny zaved.
(Packing (Mechanical engineering)) (Steam engines)

BONDAR', Sof'ya Naumovna

[Anthology in the German language for medical workers]
Khrestomatiia na nemetskoyazyke dlia medikov. Moskva,
Medgiz, 1958. 219 p.
(MIRA 12:6)
(GERMAN LANGUAGE--TERMS AND PHRASES)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1

BONDAR', S.Ye. (Moskva)

Movement of the spindle of a grinding wheel with an eccentrically concentrated mass. Mashinovedenie no.1:78-85 '65.

(MIRA 18:5)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1"

BONDAR', T.

Construction workers of Bor need help. Sov. profsoiuzy 16 no.18:
25-27 S '60. (MIRA 13:10)
(Bor—Construction industry)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1

BONDAR', T. (Smolensk)

A man entered a pharmacy. Sov. profsoiuzy 7 no.13:43-46 J1 '59.
(MIRA 12:10)
(Smolensk--Drugstores)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206210018-1"

BONDAR', T.A.; BAKANOV, N.A., spetsred.; KOVALEVSKAYA, A.I., red.; YAROV,
E.M., tekhn. red.

[Technical improvements at the Rosvianskiy Starch and Molasses
Plant] Tekhnicheskie usovushchenstvovaniia na Rosvianskom krakhmalo-
patochnom zavode. Moskva, Pishchepromizdat, 1956. 19 p. (Obmen
peredovym tekhnicheskim opytom). (MIRA 11:10)

(Starch industry--Equipment and supplies)
(Molasses)

BONDAR', T.A.

Operating experience of a new screening station at the Klim Starch
Plant. Sakh.prom. 34 no.7:62-64 Jl '60. (MIRA 13:7)

1. Klimovskiy krakhmal'nyy zavod.
(Klim--Starch industry—Equipment and supplies)

BONDAR', V.

"Masters of the atoms" by A. Buianov. Reviewed by V. Bondar'.
IUn.Tekh. 4 no.5:36 My '60. (MIRA 13:?)
(Chemical engineering)
(Buianov, A.)

BONDARCHUK, V., akademik

Prospecting in the depths of the earth. Nauka i zhyttia 12
no.7:46-48 Jl '62. (MIRA 16:1)

1. AN UkrSSR.
(Earth—Internal structure) (Geological surveys)

BONDAR', V. A.

BONDAR', V.A.: "Pathomorphological Changes in the Intramural Nervous Apparatus of the Vermiform Appendix in Acute Appendicitis of Children." Khar'kov State Medical Inst. Khar'kov, 1956. (Dissertation for the Degree of Candidate in Medical Science)

So: Knizhnaya Letopis', No. 18, 1956.

BONDARI', V.A. (Khar'kov, ul. Timiryazeva, d. 36, kv. 1)

Apparatus for transfusion of oxygenated blood. Nov. khir. arkh. no.2:
130-131 Mr-Ap '59. (MIRA 12:7)

1. Khirurgicheskaya klinika (Zav. - prof. V. I. Iost) l-y dorozhnoy
bol'nitsay Khar'kova.
(MEDICAL INSTRUMENTS AND APPARATUS) (BLOOD—TRANSFUSION)

GAN, G.S., prof.; GRECHISHKIN, D.K., prof.; BONDAR', V.A., dotsent; SKRIPKA, V.K., kand. med. nauk; BOLDYREV, Ye.N., kand. med. nauk; PASHCHENKO, N.P., kand. med. nauk; SYROEZHKIN, P.V., inzh.; KLIMOV, D.D., inzh.

Hygienic conditions and labor safety at Donetsk hydraulic mines.
Ugol' 39 no.9:87-88 S '64. (MIRA 17:10)

1. Luganskiy meditsinskiy institut (for Gan, Grechishkin, Bondar', Skripka, Boldyrev, Pashchenko). 2. Ukrainskiy nauchno-issledovatel'skiy institut hidrodobychi ugliya (for Syroezhkin, Klimov).

SAMARAY, L.I.; BONDAR', V.A.; DERKACH, G.I.

Reaction of carboxylic acid amidines with oxalyl chloride,
Zhur. org. khim. 1 no.11:2004-2008 N '65. (MIRA 18:12)

I. Institut organicheskoy khimii AN UkrSSR. Submitted
January 18, 1965.

ACC NR: AP6036808

SOURCE CODE: UR/0368/66/005/005/0568/0573

AUTHORS: Bondar', V. A.; Kiselevskiy, L. I.

ORG: none

TITLE: Obtaining spectroscopic investigation of a plane-parallel axisymmetric plasma layer in pulse discharge over a wide temperature range

SOURCE: Zhurnal prikladnoy spektroskopii, v. 5, no. 5, 1966, 568-573

TOPIC TAGS: plasma, plasma temperature, spectrographic analysis, plasma production, high speed photography

ABSTRACT: A method is described for producing plane-parallel axisymmetric plasmas by a pulse discharge. It consists of placing two plexiglass plates, 2 mm apart, between electrodes and opening a 2.5-mm hole in each plate along the electrode axis. The half-period of the discharge is 100 μ sec at 1.5 kv and 5000 amp maximum current. The plasma is analyzed by means of high speed photography and spectrographic methods. The photographs show that the plasma is continuous and expands radially at a very high speed (3--5 km/sec). The spectrographic analysis indicates a very high temperature core (10^5 K), about 7 mm wide, consisting mainly of oxygen ions and hydrogen atoms, followed by a very sharp drop in temperature which reaches 5000K at a radial distance of 20 mm. The dominant species in the cold fringes are CN and C₂. The authors thank M. A. Yel'yashevich for his interest in the work. Orig. art. has: 4 figures.

Card 1/1 SUB CODE: 20,141 SUBM DATE: 15Dec65/ ORIG REF: 007/ OTH REF: 002 UDC: 537.52

67882

16(1) 16.7300

AUTHOR:

Bondar', V. D.S/020/60/130/06/011/059
B013/B007

TITLE:

Some Exact Solutions of the Equations of Compatibility for
the Components of the Deformation Tensor Under Simple Load

PERIODICAL:

Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 6, pp 1218 - 1219
(USSR)

ABSTRACT:

According to L. I. Sedov (Ref 1) a special-type deformation corresponds to a simple load. The components of the tensor ϵ_{ij} of the finite deformation with a simple load must satisfy the equations of compatibility determined by L. I. Sedov. In the present paper, the equations of compatibility are investigated in a more exact form, and two exact solutions of these equations are given. In the aforementioned earlier paper by L. I. Sedov the equations of compatibility for ϵ_{ij} are given

in the form $\frac{\partial G_{\nu\mu i}}{\partial \xi^j} - \frac{\partial G_{\nu\mu j}}{\partial \xi^i} = 0, g^{*\alpha\omega}(G_{\omega\mu j}G_{\alpha\nu i} - G_{\omega\mu i}G_{\alpha\nu j}) = 0$

X

Card 1/4

67882

Some Exact Solutions of the Equations of Compatibility S/020/60/130/06/011/059
 for the Components of the Deformation Tensor Under B013/B007
 Simple Load

with $G_{\nu\alpha j} = \frac{\partial \varepsilon_{\alpha\nu}}{\partial \xi^j} + \frac{\partial \varepsilon_{j\nu}}{\partial \xi^\alpha} - \frac{\partial \varepsilon_{\alpha j}}{\partial \xi^\nu}$, $\|g^{\alpha\omega}\| = \|g_{\alpha\omega}^0 + 2k\varepsilon_{\alpha\omega}\|^{-1}$,
 where $g_{\alpha\omega}^0$ denotes the unit tensor; the coefficient k may assume
 arbitrary values in the interval (0,1). In these and in the
 following formulas summation is carried out over the repeatedly
 occurring indices α and ω . The independent equations corres-
 pond to the following index systems: $ij\mu\nu = 1212, 1313, 2323,$
 $1213, 2123, 3132$. With a deformation corresponding to a simple
 load the components of the tensor of finite deformation must
 satisfy the following 24 equations of compatibility:

$$\frac{\partial G_{\nu\alpha i}}{\partial \xi^j} - \frac{\partial G_{\nu\alpha j}}{\partial \xi^i} = 0, B_{\alpha\beta\gamma\mu\nu} = 0, \varepsilon_{\alpha\omega} B_{\omega\alpha i j\mu\nu} = 0, \varepsilon'_{\alpha\omega} B_{\omega\alpha i j\mu\nu} = 0.$$

In the general case these equations are nonlinear, partial, and
 of second order. The homogeneous (affinitive) deformation
 $\varepsilon_{ij} = \text{const}$ renders a simple load possible. Next, the con-
 siderations for the determination of the other solutions of

Card 2/4

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Some Exact Solutions of the Equations of
Compatibility for the Components of the Deform- S/020/60/130/06/011/059
ation Tensor Under Simple Load B013/B007

the system of equations just written down are discussed. In
this way one finds $\varepsilon_{ij} = \frac{1}{2}(\psi_{ij} + \psi_{ji})$, $B_{\omega aij\mu\nu} = \frac{D(\psi_{\alpha\mu}, \psi_{\alpha\nu})}{D(\xi^j, \xi^i)}$.

The remaining equations of this system are satisfied if the
functions ψ_{ij} satisfy the equations $B_{\omega aij\mu\nu} = 0$ with $\alpha, \omega = 1, 2, 3$.
All functions ψ_{ij} are then interdependent and may therefore in
general be expressed by a single one of them. All components
 ε_{ij} will then be arbitrary functions of one component (e.g.

ε_{11}): $\varepsilon_{ij} = f_{ij}(\varepsilon_{11})$, $i, j = 1, 2, 3$. The functions ψ_{ij} may also
be determined from the equations $B_{\omega aij\mu\nu} = 0$ with $\alpha = \omega$, and
 $B_{\omega aij\mu\nu} = -B_{\alpha aij\mu\nu}$ with $\alpha \neq \omega$, $\alpha, \omega = 1, 2, 3$, and then the equa-
tions of compatibility are satisfied. Apart from the above-
mentioned solutions, another solution follows from these equa-
tions, in which the three functions with a different first
indices are arbitrary. However, the functions with the same

Card 3/4

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